



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,574	12/15/2000	Gerke Spaling	2380-208	3655

7590 09/11/2003

NIXON & VANDERHYE P.C.  
8th Floor  
1100 North Glebe Road  
Arlington, VA 22201

EXAMINER

ZEWDU, MELESS NMN

ART UNIT	PAPER NUMBER
----------	--------------

2683

DATE MAILED: 09/11/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/736,574

Applicant(s)

SPALING ET AL.

Examiner

Meless N Zewdu

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) none is/are withdrawn from consideration.
- 5) ☐ Claim(s) none is/are allowed.
- 6) ☐ Claim(s) 1-9, 12, 15-19 and 45-52 is/are rejected.
- 7) ☐ Claim(s) 10-11, 13-14 and 20-44 is/are objected to.
- 8) ☐ Claim(s) none are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 15 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is the first on the merit of the instant application.
2. Claims 1-52 are pending in this action.
3. Claims 20-32 and 34-44 will be allowed provided the informalities objected, as shown below, are addressed properly.

#### ***Drawings***

The drawings are objected to because of a punched hole on labeling (see fig. 9). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Specification***

The disclosure is objected to because of the following informalities: in the category of "Related Application", the serial number of the application indicated as present is missing. Appropriate correction is required.

#### ***Claim Objections***

Claims 20 and 34 are objected to because of the following informalities: on lines 22-23 of claim 20 and lines 2-4 of claim 34, the second number of transmit power

Art Unit: 2683

commands appear to be sent to a cell different from the first cell to which the first number of transmit power increase commands are sent. This is contrary to what is disclosed in the specification (see page 13, lines 9-25). The problem can be corrected by changing the indefinite article 'a' to 'the' on line 23 in claim 20 and on line 4 in claim 34. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-8 and 45 are rejected under 35 U.S.C. 102(a) as being anticipated by Laakaso (WO 00/383,348).

**As per claim 1:** in a cellular mobile radio communications system supporting communications over a radio interface between a radio network and mobile terminals, a method comprising:

Determining a load condition of a cell, without having to measure a radio parameter, based on issued transmit power control commands reads on '348 (see page 2, line 33- page 3, line 31, particularly, page 3, lines 5-9). The prior art monitors and determines traffic load condition and further regulates the load by manipulating the power control system. Here, manipulating indicates the exclusion of measurement.

Art Unit: 2683

Regulating a traffic condition in the cell based on the determined load situation reads on '348 (see page 3, lines 5-9, lines 25-31).

**As per claim 2:** the method wherein the traffic condition relates to a load condition in the cell reads on '348 (see page 3, lines 5-9).

**As per claim 3:** the method wherein the traffic condition relates to a capacity in the city reads on '348 (see page 3, lines 5-9; page 5, lines 5-11). Also, load is inherently a measure of capacity.

**As per claim 4:** the method wherein the traffic condition is an interference level in the cell, the method further comprising:

Controlling the interference level using the determined value of the load condition reads on '348 (see page 8, lines 10-25) The prior art asserts that, in the up-link direction, the "total interference power serves as load indication parameter". Hence, controlling the load is indirectly controlling the interference using the load value.

**As per claim 5:** the method wherein the traffic condition is transmit power level, the method further comprising:

Controlling a transmit power of a base station or a channel in the cell using the determined value of the radio condition reads on '348 (see page 37, lines 17-25; page 47 line 20-page 48, line 16; page 44, line 32-page 45, line 11).

**As per claim 6:** the method wherein the traffic condition is transmit power level, the method further comprising:

Controlling the transmit power of a mobile station using the determined load condition reads on '348 (see page 44, line 32-page 45, line 11). Closed loop power control (see

page 45, lines 5-11) is known to be transmit power controlling method between a base station and a mobile station wherein the control signaling is made in both uplink and downlink directions.

**As per claim 7:** the method wherein the load condition is related to a power level reads on '348 (see page 8, lines 10-25).

**As per claim 8:** the method wherein the power level is the total power level detected at a base station reads on '348 (see page 8, lines 10-25).

**As per claim 45:** the feature of claim 45 is similar to the feature of claim 1. Hence, claim 45 is rejected on the same ground as claim 1.

### ***Claim Rejections - 35 USC § 103***

Claims 9, 12, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laakso as applied to claim 1 above, and further in view of Jeschke et al. (Jeschke) (US 6,389,265 B1).

**As per claim 9:** Laakso teaches about monitoring and controlling traffic load in a mobile communication network, particularly the in a cell. Furthermore, Laakso also teaches that cell load/traffic can be controlled by manipulating power control commands. But, Laakso does not explicitly teach about a number of increase transmit power commands issued in a cell over a time period relative to a total number of transmit power commands issued in the cell for that period, as claimed by applicant. However, in a related field of endeavor, Jeschke teaches that relative power values can be

Art Unit: 2683

transmitted which are obtained by accumulating the changes in transmitted power that have occurred since the preceding communication of the transmitted power (see col. 5, lines 20-39). The change in transmission command can include both increase and decrease. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Laakso with that of Jeschke for the advantage of indicating the drift of the transmitted power level.

**As per claim 12:** part of the feature of claim 12, particularly directed to determining the load condition of a cell without having to measure a radio parameter, is similar to the feature of provided in claim 1. Hence, the feature of claim 12 that is similar to the feature of claim 1 is rejected on the same ground and motivation as claim 1. The difference feature of claim 12 is provided hereinbelow.

Monitoring a first number of increase transmit power commands issued in a cell over a time period relative to a second number of decrease transmit power commands issued in the cell for that time period reads on '265 (see col. 5, lines 19-39).

**As per claim 15:** the method further comprising:

Measuring a value associated with the load condition, and using the measured value along with the determined value of the load condition to regulate the traffic condition in the mobile radio communications system reads on '348 (see page 8, lines 10-35; see table on page 9). In the table, on page 9, first block, lines 1-14, it is shown that the total interference is measured.

**As per claim 16:** the method wherein the measured value is a received power or interference level in the cell reads on '348 (see table on page 9, first block, lines 1-14).

Claims 15-19, 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laakaso as applied to claims 1 and 45 above, and further in view of Padovani (US 6,192,249 B1).

**As per claim 15:** but, Laakaso does not explicitly teach about measuring a value associated with the load condition and using the measured value along with the determined value of the load condition to regulate the traffic condition in the mobile radio communications system, as claimed by applicant. However, in a related field of endeavor, Padovani teaches about the need to measure the reverse link load for the purpose of limiting the load on the reverse link wherein the reverse link load is a function of the traffic load on the reverse link and interference from other sources (see abstract; col. 6, lines 42-67; col. 11, line 56-col. 12, line 3; col. 12, lines 41-62).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Laakaso with that of Padovani for the advantage of accurately estimating/determining the reverse link load of a system.

As per claim 16: the method wherein measured value is a received power or interference in the cell reads on '249 (see col. 3, line 66-col. 4, line 9).

**As per claim 17:** the method further comprising:

Weighting each issued transmit power control command based on a predetermined factor reads on '249 (see col. 12, lines 47-57). Summing same as weighting.

Determining the load situation based on the weighting commands reads on '249 (see col. 12, lines 47-57).



**As per claim 18:** the method wherein the predetermined factor is the bit rate is associated with the issued transmit power control command reads on '348 (see page 26, lines 2-24).

**As per claim 19:** the method wherein the predetermined factor is a activity factor of a connection associated with the issued transmit power control command reads on '348 (see page 26, lines 2-24).

**As per claim 51:** the features of claim 51 are similar to the features of claim 17. Hence, claim 51 is rejected on the same ground and motivation as claim 17.

**As per claim 52:** the feature of claim 52 is similar to the feature of claim 18. Hence, claim 52 is rejected on the same ground and motivation as claim 18.

Claims 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laakso in view of Jeschke as applied to claims 1 and 45 above, and further in view of Takano (US 5,924,043).

**As per claim 46:** but, Laakso in view of Jesche do not explicitly teach about an electronic circuitry that include a counter for determining a load condition of a cell, as claimed by applicant. However, in a related field of endeavor, Takano teaches that speed detectors performs same function and include counters and accumulators used for counting step size adjustments of power control command (see col. 13, line 25-col. 14, line 3; col.16, lines 1-20; col. 18, lines 31-62; col. 21, lines 1-44; col. 22, lines 21-col. 23, line 18). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the above references with the teaching of

Art Unit: 2683

Takano (particularly, directing to the step size counters) for the advantage of counting accumulated transmission power control commands.

**As per claim 47:** the apparatus wherein the counter is configured to increment with each increase transmit power command and decrease with each decrease transmit power command reads on '043 (see col. 22, line 55-col. 23, line 5).

**As per claim 48:** the apparatus further comprising means for averaging the counter output reads on '043 (see col. 18, lines 31-62).

**As per claim 49:** the apparatus further comprising means for determining a derivative of the counter output reads on '043 (see col. 16, lines 11-19).

**As per claim 50:** the apparatus further comprising:

Means for measuring a power level in the cell reads on '043 (see page 2, line 25-page 3, line 9; page 4, lines 13-33; page 9, top block).

Wherein the controller is configured to regulate a traffic condition in the cell based on the determined load condition and the measured power level in the cell reads on '043 (abstract; page 2, line 25-page 3, line 9; page 4, lines 13-33; page 9, top block).

### ***Allowable Subject Matter***

Claims 10, 11, 13-14, 20-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meless N Zewdu whose telephone number is (703) 306-5418. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (703) 308-5318. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Meless Zewdu

M. Z.

Examiner

16 August 2003.



**WILLIAM TROST**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**